



ORAL HEALTH, QUALITY AND ACCESSIBILITY OF DENTAL CARE SERVICES IN PEOPLE WITH DISABILITIES

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ABSTRACT

Dental Education has an essential impact on providing comprehensive dental care services to people with disabilities (PWD). The World Health Organization (WHO) recognizes disability as a priority issue for global public health, human rights and development. Based on the aims and objectives of the research, a cross-sectional study was selected as a research design with quantitative, qualitative and observational methods. The research was conducted in Georgia, sample size was selected based on the data from the Social Service Agency, 740 respondents took part in the research. 370 of them were PWD, while 370 - a control group. The DMFT index in people with disabilities is significantly higher (12.0) than in the control group (5.8). It was found that 90% of the clinic managers do not have information about the specific needs of people with disabilities, 66% of the dentists do not provide complete dental services to people with disabilities, and only 5% of the dentists participated in specific training courses in order to improve the quality of dental care services for PWD. Based on the specifics of dental care services for people with disabilities, to assess and develop personalized treatment plans, it is necessary to establish an evidence-based concept in dental clinics. The oral health and comprehensive dental care services for people with disabilities are significantly unsatisfactory in Georgia. Within the framework of continuous medical education, dentists need constant training in order to provide complete dental care services to people with disabilities.

KEYWORDS : People with Disabilities; Oral Medicine; Oral Health; Dental Education;

Introduction:

The World Health Organization (WHO) recognizes disability as a priority issue for global public health, human rights and development. Compared to people without disabilities, people with disabilities face many barriers in getting medical services, which subsequently affects their health condition. Providing comprehensive dental services to people with disabilities remains one of the major challenges. Approaches to these problems and ways to solve them, depend on the policies of the country's economic, social and health systems. According to the Law of Georgia "On the Rights of People with Disabilities" - "a person with a disability" (PWD) is person with a strong physical, mental, intellectual or sensory impairment, whose interaction with various obstacles may prevent him/her from full and effective participation in public life together with others under equal conditions". The appointed law determines the availability of independent life and full participation in all the spheres of life for people with disabilities, without discrimination and under equal conditions with others, including accessibility to health care services, which is vitally important. Accessible environment is a set of physical, institutional and social conditions that provide a person with disabilities with an equal opportunity to get appropriate dental care services. The oral health as well as the quality and availability of dental care services affect both the health status of the current population and the public health as a whole.

The dental caries and periodontal diseases are more common in people with disabilities, than in people without disabilities. The treatment of each person with a disability requires specific knowledge of his/her general health condition and the individual selection of treatment methods by doctors and dentists.

Since the dental care needs of people with disabilities are specific, so should be the oral health assessment, treatment planning, and course of treatment. The concept of evidence-based dentistry should be actively used, which will lay the foundation for the use of personalized approaches to treating people with disabilities.

Materials and Methods:

Based on the aims and objectives of the research, to assess the oral health, quality and accessibility of dental care services of people with disabilities in Georgia, a cross-sectional study was selected as the research design. Out of the research methods, we used the quantitative, qualitative and observational methods. For the quantitative research, we used a questionnaire to interview people with disabilities in Georgia. We used the qualitative method - in-depth interviewing - while interviewing dentists and managers of dental clinics and people with disabilities. By means of the observational method, we performed the oral examination of people with disabilities and controlling, typically developing population. The questionnaire was approved by the ethics committee of Biomedical Research of the University of Georgia. Also, on the basis of one of the important tasks of the research, which implies the development of recommendations for the modification and improvement of dental educational programs, the research and analysis of the dental educational programs operating in Georgia was carried out. Age groups for the research were determined and the questionnaire was developed according to the "Oral Health Surveys, Basic Methods, 5th Edition" guide provided by the World Health Organization. The grouped unit for randomization was determined by age groups of people with disabilities under 15-19, 35-44 and 65-74.

Results:

The research sample size was selected based on the data from the Social Service Agency in Georgia, 740 respondents took part in the research. 370 of them were PWD, while 370 - a control group. The following pathologies were used as a basis for granting the status of disability: chronic renal failure, Asperger's syndrome, malignant tumor of the larynx, cerebral palsy, mental retardation, paranoid schizophrenia, Down syndrome, speech disorder, oligophrenia, epilepsy, microcephaly, spinal trauma, paraparesis, glaucoma, blindness, behavioral and emotional disorders, schizophrenia, autism spectrum disorder, depressive disorder, congenital defect of upper limbs, problematic cerebral hemorrhage, paraplegia, spinal cord injury, retinal

detachment, complete atrophy of the optic nerve, cataract, spinal cord tumor, limb amputation, vertebral fracture, arteriovenous malformation of the brain, hearing loss, deafness. Both, the basic group of people with disabilities and the typical control group were divided into three age groups: 15-19, 35-44 and 65-74 ages, residing at the following locations: three big cities and three municipalities in Georgia. As a result of examining the oral cavity of the individuals involved in the research, a significantly different DMFT index was revealed between the main group (PWD) and the control group. DMFT index in people with disabilities appears to be significantly higher (12.0) than in the control group (5.8).

The t-test shows the difference in the number of DMFT, decayed, filled and extracted teeth in the basic and control groups. Both, the Fisher's statistical method and the t-test show that the difference is statistically significant ($p < 0.001$) (Table 1).

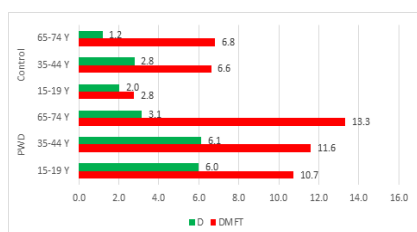
Level of DMFT index in people with disabilities and crosstabulation in the control group. Table 1

		DMFT				In total
		Healthy	Low	Moderate	High	
Basic	Quantity	23	140	64	143	370
	Percentage	6.2%	37.8%	17.3%	38.6%	100.0%
Controlling	Quantity	87	180	61	42	370
	Percentage	23.5%	48.6%	16.5%	11.4%	100.0%
In total	Quantity	110	320	125	185	740
	Percentage	14.9%	43.2%	16.9%	25.0%	100.0%

A different DMFT index was observed between people with disabilities and the control group according to regions as well. According to the cities and municipalities, in PWD, the DMFT index appears higher in municipalities (15.0) than in big cities (10.8).

It is important to evaluate oral health according to age groups in both the basic and the control groups. Here, there was a difference as well. In particular, the DMFT index in the basic contingent of 15-19-year-olds (people with disabilities) was 10.7, while in the control group - 2.8. The average DMFT index among the 35-44-year-old in the basic contingent was 11.6, in the control group with the same age distribution it was 6.6. As for the 65-74-year-old, in the basic contingent (people with disabilities) the DMFT index was determined to be 13.3, while in the control group - 6.8 (Chart 1).

DMFT index and caries intensity in PWD and control group according to age groups in Georgia. (Chart 1).

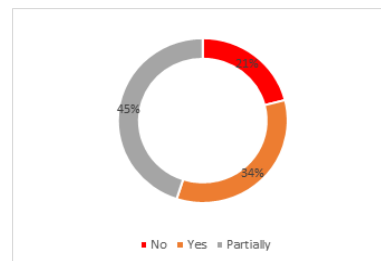


40 managers of dental clinics and 200 dentists participated in the research. The survey of the mentioned contingent was carried out at the same location. It was found that 90% of the clinic managers are not familiar with the mandatory evacuation means and the existence of a plan for protecting people with disabilities from risks caused by natural disasters. Also, 90% of the clinic managers do not have

information about the specific needs of people with disabilities in the dental environment, only 5% of the respondents have information about the technical regulation of the arrangement of space for people with disabilities and the architectural planning elements, 5% of the interviewed managers have information about adapted dental chair and the braille font. It was determined that 65% of the clinics do not provide complete dental care services to people with disabilities, 20% of the clinics provide complete dental care services only with the help of a family members, and in 10% of the managers noted, that they cannot receive patients with disabilities. Positive discrimination is rarely found in relation to people with disabilities; 85% of the clinic managers do not use a positive advantage for them, only 5% of the clinics provide free dental services to beneficiaries within the framework of social responsibility, that too, with certain deadlines. It was established that only 15% of the dental clinics have adapted dental chairs, and 85% do not have them.

As a result of the research, it has been established that the main complaints of people with disabilities, because of which they address dental clinics are acute pulpitis - 43.8%, tooth extraction - 15.2%, treatment of caries - 14.3%. 12.4% of dentists say that they have never received a person with disabilities as a patient. The opinion of dentists is important - whether they believe that they provide complete dental services to PWD, 34%, 45% of the dentists believe that they provide partially complete dental services to PWD, and 21% of the surveyed dentists believe, that they cannot fully serve people with disabilities. Chart 2.

Results of the provision of complete dental care services to PWD. Chart 2.



One of the main challenges in dental education is the lack of training courses and activities on the existing courses for providing complete dental care services to people with disabilities within the scope of continuous professional development. As a result of the research, it has been established that only 7% of the dentists have completed CPD courses in the field of special care dentistry in Georgia, and 93% do not have such an experience.

According to the data of 2021-2022, 19 state and 34 private universities are operating in Georgia. Out of these universities, 4 state and 11 private universities are providing one-stage dental education programs. The dental education program in Georgia is carried out in three languages: Georgian, Russian and English. According to the list of medical specialties provided by the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia, there are four specialties in Dentistry in the country: Therapeutic Dentistry, Prosthetic Dentistry, Orthodontics and Maxillofacial Surgery. In order to provide dentists with additional competence (Therapeutic Dentistry and Prosthetic Dentistry), the sub-specialty "Oral Cavity Surgery" is implemented, which ensures the performance of surgical dental manipulations of the oral cavity at the ambulatory level. As a result of the data analysis found in the research process, no subject is taught in any dental educational program in Georgia which would

comprehensively cover the specific needs of people with disabilities. "Special Care Dentistry" is a field that considers a set of oral care services for the individuals who cannot receive individual hygienic, routine dental services as a result of various physical, intellectual, medical, emotional, sensory, mental disorders.

Discussion:

One of the main challenges of modern dental educational programs is to ensure that all members of the society receive modern quality dental services. The results and competencies, which will be developed and provided according to the curriculum, shall be responsible for ensuring the given goals. Within the framework of continuous medical education, dentists need constant training in order to provide complete dental care services to people with disabilities.

People with disabilities must have equal access to health care services, which means: availability of health care facilities; implementation of various types of health care programs; promoting the introduction of appropriate standards and methods that will make use of specific services accessible to people with disabilities; provision of preventive, early diagnosis and treatment and rehabilitation services, which ensures the identification of the causes of a disability and its minimization. These programs shall preferably include the dental services and the planning and development of preventive measures for dental diseases for people with disabilities.

Conclusion:

The oral health of people with disabilities is significantly unsatisfactory, and comprehensive dental care services are less accessible, compared to the control group in Georgia. The status of disability is an important risk factor for increasing decayed, filled and missed teeth; there is a significant difference between the oral health of people with disabilities living in cities and municipalities. Not all dental clinic managers are informed about the specific needs of people with disabilities, which reduces the quality of dental care services; in order to improve their competencies and qualifications, with the aim of providing dental care services to people with disabilities, dentists need specific trainings within the framework of continuous professional development; based on research, it was established that it is necessary to promote oral health advocacy for people with disabilities. As oral health has a significant impact on acute and chronic diseases, it will contribute to improve the quality of life for people with disabilities;

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